ARGUMENT

Applicants and their attorney appreciate the courtesies extended by the Examiner and his Supervisor during the recent interview on April 5, 2005. The claims have been amended along the lines suggested at the interview and also to overcome the various objections and rejections made by the Examiner in the Office Action dated February 24, 2005.

The applicants have noted that the image file wrapper of the subject application is available on PAIR. In most cases, the image file wrapper is not available to the general public until such time as a patent issues on the application. In fact, applicants' attorney has recently applied for a customer number permitting the attorney access to only those files for which he is attorney of record. Applicants seek clarification as to why this particular application is available to the general public through PAIR at this stage of the prosecution.

As the Examiner has requested, applicants have reviewed the specification and claims in view of the art cited by the Examiner and has further reviewed the pop-up art. A Supplemental Information Disclosure Statement is filed concurrently with this Response providing the Examiner with a listing of the relevant pop-up art located by the Applicants.

By way of explanation, applicant has determined that there are three distinct methods of providing additional information to a subscriber when he is surfing the Internet, namely: (1) The Brothers shove server system and related prior art, (2) Pop-up systems, and (3) Applicant's method as described in the pending application. By way of summary, Brothers intercepts and modifies a subscriber request packets and sends them to a new destination address. The Pop-up systems are destination controlled and the subscriber, upon reaching the requested destination is then "hooked" into or "switched" into an additional destination via the original destination page content. (Another method of generating Pop-ups is the installation of spy ware on the

subscriber's system, but that is not pertinent to the subject invention. Applicants have limited this discussion to systems that are downstream of the subscriber). Finally, applicants' invention provides a third, new and novel method for revising a request by the subscriber by looking at or examining the subscriber's original request as the subscriber completes the connection to the real, intended destination and then selectively adding an additional request to the original request. The subscriber's original request is handled without alteration.

The Brothers and Related Art

The first method is the one shown and described in the Brothers U.S. Patent No. 6,438,125 relied on by the Examiner. Brothers and the prior art preceding Brothers are similar with the exception that Brothers has inserted a Web Page Shove Server in place of a Web Page Cache Server, as illustrated in Fig. 2 and Fig. 1, respectively, of Brothers. In both of these systems, the Web Traffic is modified and the destination address intended by the subscriber's packets is redirected to a new destination.

By way of contrast, applicants' invention does not alter the original Web Traffic initiated by the subscriber and does not redirect the subscriber's packets to a new destination address. As now more clearly stated in the claims, particularly amended Claim 1, the original Web Traffic is examined by applicants' invention and the subscriber is identified. Then based on the identification, applicant's invention is adapted for adding an additional message to the original Web Traffic request of the subscriber and communicates this back to the subscriber, instructing the subscriber to not only go to the originally requested site as stated in the original Web Traffic, but also to go to an additional site for a message which will then be delivered to the subscriber along with the original Web Traffic.

Thus, the primary difference between the Brothers patent and the related prior art is that Brothers modifies and redirects the subscriber request packets away from the original destination, whereas applicants' method preserves the subscriber request and connection to the original destination but may selectively modify it to include additional information, as well.

Pop-Up Art

Applicants have located numerous Pop-up system patents. By way of summary, all of these require that the subscriber initially reach his intended original destination URL. The destination sever then delivers the Pop-up message back to the subscriber along with the original request. Typically, this is accomplished in one of two methods. In the first method, once the subscriber reaches the destination server, he is then automatically "hooked" onto a Pop-up which is then delivered to him in addition to his original request. An example of this is the typical Pop-up which occurs whenever various sites are visited. For example, if a subscriber logs on to the Drudge Reports (drudgereport.com) web site he will immediately start receiving various additional messages which are provided by other sites by virtue of the fact that these sites are hot-linked or "hooked" within the content of the Drudge site. In the second method, once the subscriber reaches the destination server he is asked to provide additional information. Once given, this information is used by the destination server to switch on additional Pop-up messages. An example of this type of Pop-up can be demonstrated by logging onto weather.com. Once the original requested information is delivered to the subscriber, he is then asked to provide certain region specific information such as the Zip code where he is located for local weather. Once this information is provided, certain Pop-up links, such as regional advertising is dynamically constructed as additional content within the requested, delivered page.

Applicants' have located a number of patents that demonstrate the Pop-up systems:

USP 5,105,184: This patent discloses an integration auxiliary, pop-up-type, on-screen advertising windows with software. This is a pre-Internet method of providing non-communication application – ads are part of application.

USP 5,740,549: This patent is an information and advertising distribution system and method. The described system requires special software component on every user's computer. It is directed to advertisement and is specific to determining user preferences to target advertising message and, in particular, to storing user profiles to enhance demographic targeting of appropriate advertisements. It is not directed to provider support functions and lacks method of identifying user by provider account or address to target specific support messages.

USP 5,913,040: This patent discloses a system that requires special software component on every user's computer. It is specific to determining user preferences to target advertising message. The objective is to transmit information during low network usage time or from local user's own disk drive. The patent is not directed to provider support functions and lacks method of identifying user by provider account or address to target specific support messages.

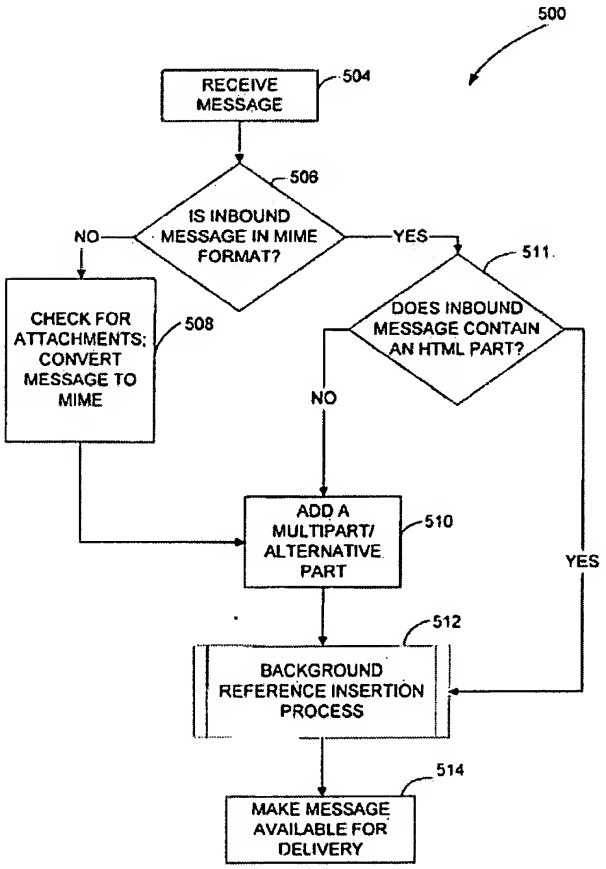
USP 6,148,332: This patent requires special software component on every user's computer in order to get Internet service from the provider incorporating this component into the log-on procedure. The patent describes a method for determining user preferences to target advertising message and, in particular, to storing user profiles to enhance demographic targeting of appropriate advertisements. The patent is not directed to provider support functions and lacks method of identifying user by provider account or address to target specific support messages. Messages may be delivered without software using a special portal-redirection link.

USP 5,751,956: This patent is not directed to a provider-based or destination-based messaging but, instead, is intended to provide portals, such as Yahoo or Google, with links that can message to the user and, additionally, provide accounting data for accesses. The system

works by having all links displayed on pages at the portal to be replaced with links to a portal-based server that include the ultimate link destination redirect request. It is not a provider-supplied messaging system.

USP 6,205,432: This patent discloses a system that can be implemented as a "network-bump-in-the-wire", two-interface device that passes all e-mail or Web traffic through itself and inserts material into the fetched item as shown, below:

FIG. 10



This could be implemented as a software component in the networking data stream in each subscriber's computer.

USP 5,974,451: This patent discloses a specific application to advertisement with "selection" of recipients and profiling for receiving of appropriate advertisement although little is described to support a means to do this. In contrast, the subject applications addresses the

support application and the ability to direct alerts to specific subscribers based on current, ephemeral network identifiers or account identifiers. It should be noted that the subject application describes a viable mechanism to do this including means to reduce the overhead on the infrastructure to insignificant levels while achieving it. The '451 patent's system architecture is derived from firewall Proxy servers, a network device that has been in use for over 10 years. It is utilized in this patent, as shown in this drawing from their patent.

The following Figures from the '451 patent illustrate that the prior art operation is a two-interface device that passes all data through itself:

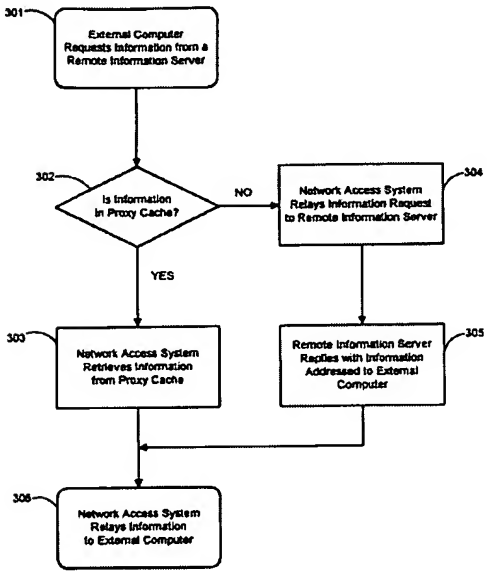


FIG. 3
(PRIOR ART)

The proxy architecture is a 2-interface device wherein ALL upstream and downstream data between all subscribers and the Internet must pass through the device. The implementation of such a device is problematic considering that it would be acceptable to Internet providers only if it introduced insignificant latency and could handle the maximum throughput of existing as

well as proposed very high speed Internet connections, and could be automatically bypassed in the event of a failure (additional, unsolved problem).

The subject application describes a 1-interface device that passes no downstream data, neither relays nor supplies bulletins to the subscriber ("relay" is used in their patent), and only re-directs the connection of the user's browser to that of a server hosting the appropriate bulletin and only for user's for which there is a pending bulletin. Neither the originally requested Web page nor the bulletin page are relayed or pass through the device of the subject application. With the device of the subject application, the user always accesses the requested or bulletin page directly from the original host. The subject application is unlike any known system in that it is constructed as a new type of networking component that uses a single interface, is inherently failsafe (if it fails, the normal user connections proceed unhindered), passes no downstream data between the Internet and users, and can, therefore, be constructed of standard computer components and still operate on very high speed provider networks without performance penalties. In short, it can be introduced into existing provider networks.

USP 6,880,123: This patent is directed to a software agent loaded into the client. An "advertising tag" is also a key component of this patent.

USP 6,785,659: Similar to the '123 Patent above. An advertising tag" is added to the referral and there is also a continuously-operating client module.

USP 6,771,290: This patent requires client software and performs user identification in the client.

USP 6,725,203: This patent teaches obtaining and analyzing the requested web page, and inserting advertising into that content, followed by delivery in book form.

USP 6,636,856: This patent teaches Pop-ups (window objects), but has nothing to do with the delivery mechanism.

USP 6,628,314: This patent teaches upgrading a software application on a client. USP 6,535,882: This patent describes client software and pop-up windows.

USP 6,516,338: This patent discloses an "HTML advertising tag" which is added to the referral and a continuously-operating client module.

USP 6,466,967: This patent discloses "push" technology with a separate, permanently-instantiated client component.

USP 6,314,451: Similar to the '967 patent above.

USP 6,272,493: This patent teaches the use of a specialized software distribution server and a software client.

USP 6,141,010: This patent discloses software which is client-based.

USP 5,724,525: This patent teaches the mechanism for selecting clients and sending the list, not the delivery mechanism for the content. It is also related to cable television set-top boxes, not the Internet.

USP 6,829,780: This patent describes a client software based system, and teaches analysis of content in order to choose competitive advertisements.

USP 6,584,492: This patent teaches providing the list of ad content to the client software, and rotation of ads is performed by the client.

USP 6,442,529: This patent teaches pre-downloading of ad content associated with a specific ISP portal page. The pre-download occurs in the Internet access device.

USP 6,385,592: This patent teaches initiation of advertising by the subscriber, with a registration process, and is destination-hosted.

USP 6,188,398: This patent describes a system that is destination-hosted and teaches the incorporation of text display and possible selection while the subscriber watches a video.

USP 5,937,392: This patent teaches statistical ad rotation control and is destination-hosted.

Published Application No. 20020049968: This application is directed to a broadband provider delivery to television set-top box for display on television screens via an IP delivery system.

Published Application No. 20020133565: This application discloses a method and apparatus for displaying intermediate content messages in the unused portion of a web browser display space. This requires a special destination page to contain special scripting of the HTML code to make special messages appear and requires special software component on user's machine. This system is not a provider-supplied messaging system. It is a specific application to advertisement and its specific goal is to display advertisements in "display areas that are not used" of the accessed destination page. The messages are delivered through special user-installed software component.

Applicants' Invention

As described in the specification of the subject invention, the system does not modify the traffic, consisting of packets, between a client and its intended destination server, but examines it and then determines whether additional information should be added to the original request. This can be contrasted with both the Brothers art and the Pop-up art. Specifically, Brothers redirects the original request traffic to a new destination. The Pop-up systems do not redirect the original request, but subsequently direct the subscriber to additional sites after the original request is met. By way of contrast, applicant does not redirect the original request as in Brothers and does not modify the original request after the originally requested destination server is contacted.

The subject application utilizes the provider-to-subscriber communications facility and, therefore, these patents set forth in the supplemental information disclosure statement and discussed herein were examined to determine the possible existence of prior art. All the discovered patents have substantial differences from the subject invention in both the intended application as well as in the method of implementation.

There is the difference in application as described in all the other patents and applications found. They address advertising as opposed to the subject application which is directed at technical and operational support functions when used by Internet broadband providers.

There is the difference in the method of implementation that is unique with the subject invention. Most patents describe and known products depend upon special software components in the subscriber's computer or special software or HTML scripting in the portal Internet site or the destination site or redirects the packets to a different such destination site that does. The subject invention does not involve any change to the subscriber equipment in configuration or

software and does not require any changes to the portal or destination site format, script, or software nor changes to the packets in the traffic between the subscriber and the destination site.

Two patents described above, the '451 patent and the '432 patent, as well as the subject invention, involve network equipment that is located in the Internet provider's infrastructure and which is used to cause unsolicited messaging to appear on the subscriber's computer screen (both refer to advertisements). No software or configuration change is needed with the subscriber equipment or in the portal or destination sites. In the '452 patent and the '432 patent the devices must be implemented as a conventional "bump-in-the-wire" which means that they are inserted in a place in the network so that all subscriber traffic can flow through the device. Being inserted in the data stream is one method by which a device can add the data for advertisements into the requested data stream. The devices are also the source of the added data.

In contrast, the subject invention can have only one terminal and passes none of the traffic that the subscriber requests through itself and, in fact, neither stores the added data (bulletin), relays the data, nor passes that data through itself. This circumvents the requirement to pass the data through itself. To be an acceptable addition to an Internet Provider's infrastructure, a device must not degrade the system. Therefore, since a "bump-in-the-wire" device passes all the data, it must pass all the data at a rate equal to the fastest router in the Internet provider's infrastructure. That requirement would appear to imply the implementation of a very large and expensive hardware device. The subject invention avoids that requirement.

Another advantage to the one-interface design of the subject invention is to achieve a fail-safe relationship with the provider infrastructure. To be an acceptable addition to an Internet Provider's infrastructure, the "bump-in-the-wire" device would have to demonstrate reliability equal to or better than that of the existing infrastructure and likely incorporate a failsafe backup

or bypass mechanism. As a one-interface attachment to the network, the subject invention is able to forge a failsafe connection to the infrastructure.

Lastly, the described implementations (bump-in-the-wire, dual interface devices in the '452 patent and the '432 patent) also appear to have been available in commercial products such as the N2H2 server described later in this document. In fact, the '452 patent describes its implementation as a proxy server. Devices using this technology modify packets and addresses to transparently redirect the subscriber's traffic to the proxy server which, itself, delivers either the requested content (which it must first retrieve), the additional information, or both. The N2H2, used in a transparent proxy mode, is a dual interface proxy server that inserts operational and status messages into each subscriber-requested Web page as the subscriber retrieves pages from target destination sites.

An example of a desirable use of applicants' invention is the ability to target customers issuing packets with signatures of virus-generated communication. Customers under the influence of a "virus" can cause the system a lot of trouble without the customer having visible symptoms. Real-time communications with the customer can, often automatically, enlighten that customer to the contamination and possibly issue a required repair procedure which, if ignored, might result in the subscription being temporarily disabled.

The location of the applicant's invention at aggregation routers permits it to check every upstream connection for the signature of a virus-generated "storm" that causes system-wide degradation, and inform the customer that a virus infection is causing difficulties on his PC and that remedial action is required. Using applicants' invention, a written bulletin can include step-by-step procedures to remedy the problem saving a rather lengthy telephone dialog.

Amended Claim 1 is directed to a method which clearly describes applicant's invention and is distinguishable from both the Brothers type of art as well as the known Pop-up art. Specifically, by examining the web traffic rather than intercepting it, the initial request of the subscriber is not altered. In addition, there is not any requirement for subscriber or client based software or for any hook or switch at the destination server. The prior art requires at least one of these steps or components. Specifically, the system of the subject invention does not proxy and is essentially passive, examining the normal flow of data between client and server, and reconstructing that flow internally. So unlike a proxy, it counts on the path between client and server being established in the normal way. Only when action is desired does the invention step into the middle of the flow. A further differentiation over the prior art is that the response is not necessarily the actual data to be given to the client, but can be simply a redirection command sent to the client, causing the client to retrieve the desired data itself, from another location. The subject invention, wherein the examining step does not interfere with or modify the original web traffic, is clearly distinguishable from the art cited by the Examiner and located by the Applicant.

By way of example, in the case of a web browser, the start of a session is a TCP packet with a destination port of 80, and including the SYN flag but not the ACK flag. However, this technique is not limited to web browsers or the HTTP protocol, and other protocols can be supported in a similar fashion. Applicant's invention examines further packets of the session and determining the flow of data that is being transmitted by the client and will be seen by the destination server, without any modification to those packets, and allows the packets to continue to their intended destination. At such point that it is determined that the client traffic represents a request for data from the server, the invention may selectively transmit a response directly to the client, by assuming the identity of the destination server in a manner consistent with the expectations of the client at that point. Such transmission is accomplished using routing

mechanisms familiar to those practiced in the art. If desired, the invention transmits, to the intended destination server, an indication that the session with the client has ended. This step is offered in order to reduce the resources required by the server. Applicant's invention further permits continued interaction with the client to complete the flow of traffic for the session, in a manner consistent with Internet protocols.

REMARKS

Applicants appreciate the thorough review given this application by the Examiner, as well as the interview granted on April 5, 2005. Applicants have reviewed the application and have addressed all of the concerns, objections and rejections of the Examiner.

The Abstract has been rewritten to comply with the guidelines.

As discussed in the interview, the double patenting objection is not proper and will be withdrawn as there is not commonality of ownership.

All of the 35 U.S.C. §112 objections have been addressed by the amendment to the claims, specifically claims 4, 19, 25 and 27-34. Claim 22 has also been amended as suggested by the Examiner. It is respectfully requested that this rejection be withdrawn.

It is respectfully submitted that above arguments and the amendments to the claims clearly distinguish the invention from the primary reference Brothers and that the invention is neither suggested nor anticipated by Brothers alone or by Brothers in combination with any of the other references cited by the Examiner. It is respectfully submitted that Claim 1, as amended, is allowable over the art of record. Since the remaining claims all depend from Claim 1, said dependent claims should be allowable for the same reasoning.

Therefore, it is respectfully requested that the rejection of Claims 1-21, 23-25, 35 and 36 under 35 U.S.C. §103(a) as being unpatentable over Brothers in view of Ikudome be withdrawn; that the rejection of Claim 22 under 35 U.S.C. §103(a) as being unpatentable over Brothers in view of Ikudome and further in view of Walker et al be withdrawn; that the rejection of Claims

26, 37 and 38 under 35 U.S.C. §103(a) as being unpatentable over Brother and Ikudome as applied to claims 1 and 16 and in view of "Official Notice" be withdrawn; that the rejection of Claim 27 under 35 U.S.C. §103(a) as being unpatentable over Brother and Ikudome as applied to claim 1, further in view of Carolan be withdrawn; the rejection of Claims 28 and 34 under 35 U.S.C. §103(a) as being unpatentable over Brothers, Ikudome and Carolan as applied to claim 27 and further in view of "Official Notice" be withdrawn; that the rejection of Claims 29 and 31-33 under 35 U.S.C. §103(a) as being unpatentable over Brother, Ikudome and Carolan as applied to claim 27 and further in view of Walker be withdrawn; the rejection of claim 30 under 35 U.S.C. §103(a) as being unpatentable Brothers, Ikudome, Carolan and Walker as applied to claim 29 above and further in view of "Official Notice" be withdrawn; the rejection of Claim 39 under 35 U.S.C. §103(a) as being unpatentable over Brothers and Ikudome as applied to claim 16 and further in view of "Official Notice" be withdrawn.

All of the objections and rejections of the Examiner having been met, notice of allowance is respectfully solicited.

Respectfully submitted,
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April 29, 2005
Date

Renee Treider

3914015v.2